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Public education reform: Community or national funding of education?☆

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Abstract

I use a political economy model of public funding of education to evaluate the welfare implications of a move from a community- to a nation-wide funding policy. Broadening the scope of education finance has intragenerational redistribution effects as well as intergenerational effects. Previous studies have emphasized the intragenerational redistribution effects of moving from local to state-financed systems, while holding factor prices fixed. The model in this paper includes a social security system and allows factor prices to vary endogenously. I examine the welfare effects of broadening the scope of financing from a community- to a nation-wide system and find that there are very large welfare gains as voters "internalize" the effect of the education policy on both factor prices and social security benefits. I also focus on the intergenerational distributional effects, finding that significant welfare gains occur despite the displacement of the median voter to an older agent that cares less about children's well-being.

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1. Introduction

In the first successful school finance lawsuit, the case of Serrano vs. Priest ruled that the California education system was unconstitutional for discriminating among students in access to education. Wealthier communities, with larger tax bases, spent more per student than poorer communities while subject to lower tax rates. Since the Serrano ruling, many states have been reforming their education systems to reduce inequality. Specifically, they have been moving toward state financing of education to equalize spending across students. This has led research on public education to examine the impact of changes in education financing systems. The principal issues are the extent to which different education finance systems reduce inequality and how reform policies affect different types of agents. Models used to study these issues vary from static multi-community models (e.g., Westhoff, 1977; Inman, 1978; Epple and Romano, 1996; De Bartolome, 1990; Benabou, 1996; Fernandez and Rogerson, 1998) to dynamic models (e.g., Becker and Tomes, 1979; Glomm and Ravikumar, 1992; Fernandez and Rogerson, 2003). These analysis share in common a partial equilibrium framework which takes prices as given and focus on how school financing systems affect the amount of resources devoted to education and how these resources are distributed across students.

In this paper, I argue that general equilibrium effects are quantitatively important in the analysis of public education finance reforms. When factor prices adjust, the complementarity between capital and labor in production implies that education increases the return to capital by improving the skills of future workers. Additionally, in a pay-as-you-go social security system, and given a social security tax rate, the level of benefits received by retirees is proportional to current labor income, which is affected by the skill level of the labor force. It follows that, current funding of education also affects future social security benefits. In a political economy model of public education funding, I evaluate the welfare implications of broadening the scope of education financing. The general equilibrium effects of education policy on both factor prices and social security benefits are "internalized"[1] by voters when the education policy is chosen and financed at the national level, but not when chosen at the community level. As a result, a move to a nation-wide policy decision level augments the support for public funding of education both from agents who want to increase the return to their investment in physical capital and from those who are about to retire, thus improving welfare considerably.[2]

[1] I do not use the term "internalize" in the classical sense that relates to the existence of a technological externality, but in a broader sense that also encompasses pecuniary externalities.

[2] The importance of the impact of education on factor prices was previously developed in Soares (2003a), where I showed that it could lead selfish agents to choose very high levels of publicly funded education. The role of social security also relates to recent literature that analyzes the interaction between these two public policies. Glomm and Kaganovich (2003) study how publicly funded education and social security affect human capital distribution. Boldrin and Montes (2002) look at the allocation of public funds to education and social security to implement an efficient allocation of resources in the presence of borrowing constraints.